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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

HOFFBERG, ROBERT JOSEPH

ART UNIT PAPER NUMBER

2835

DATE MAILED: 09/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/723,722	Applicant(s) BHATTACHARYA ET AL.	
	Examiner Robert J. Hoffberg	Art Unit 2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3,6,8-14,16,19-23,25,27,34-37,39 and 40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19-23,36 and 40 is/are allowed.
- 6) ☒ Claim(s) 2,8-10,16,25,27,34,37 and 39 is/are rejected.
- 7) ☒ Claim(s) 3,6,11-14 and 35 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

Response to Arguments

1. Applicant's arguments with respect to claims 2, 8, 16, 34 and 39 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claim 16 is objected to because of the following informalities: Claim 16 is dependent on cancelled claim 15. For examination purposes, claim 16 is examined as being dependent on claim 34. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 8-10, 16, 25, 27, 34, 37 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (US 6,031,718) in view of Losinski (US 5,861,703).

With respect to Claims 2, 8, 16, 34 and 39, Suzuki et al. teach a standardized peripheral apparatus comprising a board (Fig. 19, #22); an integrated circuit (#6) coupled to the board; a case (#2), encasing the integrated circuit and the board, having a form factor including a plurality of external dimensions compatible with Personal Computer Memory Card International Association (PCMCIA) standard (Col. 1, lines 15-17) having a plurality of specifications governing the form factor and the external

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dimensions; and a thermal management arrangement including a output vent (Fig. 19, upper left) disposed on a first portion of a surface of the case to at least facilitate an exhaust of heat convectively emitted from the integrated circuit into an ambient and a flow generating device (#25) coupled to the board to provide an air current to at least facilitate the exhaust of the convectively emitted heat through the vent (claims 34 and 2), a communication interface adapter (Col. 1, lines 20-21) (claim 16) and a Type I, a Type II, or a Type III PC Card (Col. 1, lines 15-16) (claim 39). Suzuki et al. fail to teach a jet apparatus. Losinski teaches a flow generating device is a piezoelectric synthetic jet actuator (claims 34 and 8). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the apparatus of Suzuki et al. with the jet actuator of Losinski for the purpose of minimizing the number of moving parts and generating very little heat (Col. 1, line 25).

With respect to Claim 9, Suzuki et al. in view of Losinski discloses the claimed invention except for the height of the jet actuator. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the height of the jet actuator of any size that fits within the PCMCIA standard including 2-3 mm high , since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

With respect to Claim 10, Suzuki et al. in view of Losinski discloses the claimed invention except for the operating power of the jet actuator. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the

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input power of the jet actuator to be of any value that is below the PCMCIA standard including 10 and 50 milliwatts, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding method claims 37, 25 and 27, the method steps recited in the claims are obviously necessitated by the device structure as taught by Suzuki et al. in view of Losinski as recited above in the rejection to claim 34 and 8 including that the vent is an outlet vent (Suzuki, Fig. 19, upper left) and providing an inlet vent (Fig. 19, lower right) to introduce air from an ambient into an interior of the case.

Allowable Subject Matter

5. Claims 19-23, 36 and 40 are allowed.
6. Claims 3, 6, 11-14 and 35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. The following is a statement of reasons for the indication of allowable subject matter: Claims 3 and 36 and all claims dependent thereof are allowable over the art of record because the prior art does not teach or suggest that a apparatus having “a board”, an “integrated circuit”, “a case” having an external form factor compatible with PCMCIA standard, “an outlet vent” on a first portion of a surface, “an inlet vent” on a second portion of the surface and “a jet actuator”. The aforementioned limitations in combination with all remaining limitations of the respective claims are believed to render said claims 3 and 36 and all claims dependent thereof patentable over art of record.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. "PC Card Primer," Personal Computer Memory Card International Association, <http://www.pcmcia.org/pccard.htm> (submitted by applicant on 6/15/06) discloses that PC cards meeting PCMCIA specification have case form factors defined by Type I, Type II and Type III requirements and having a 32-bit Cardbus connector. Ito (JP 2000-082890) teach a case having an external form factor compatible with PCMCIA standard, a flow generating device, an outlet vent on a first portion of a surface, an inlet vent on a second portion of the surface, a partition providing a plurality of air chambers connected orthogonally to the case for cooling an adjacent board with an integrated circuit. Kitagawa (JP 10-334204) teaches a board having an integrated circuit, a case having an external form factor compatible with PCMCIA standard, an inlet vent and an outlet vent allowing for an airflow over the integrated circuit.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert J. Hoffberg whose telephone number is (571) 272-2761. The examiner can normally be reached on 8:30 AM - 4:30 PM Mon - Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on (571) 272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MICHAEL DATSKOVSKIY
PRIMARY EXAMINER

RJH *enb*

Michael Datskovskiy
09/21/06